

## Case 3369

***Bothynus* Hope, 1837 (Insecta, Coleoptera, SCARABAEIDAE): proposed conservation of usage by designation of *Scarabaeus ascanius* Kirby, 1819 as the type species**

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**Abstract.** The purpose of this application, under Article 70.3.2 of the Code, is to conserve the current usage of the generic name *Bothynus* Hope, 1837 for well-known scarab beetles of the family SCARABAEIDAE (subfamily DYNASTINAE) by designation of *Scarabaeus ascanius* Kirby, 1819 as the type species. The type species of *Bothynus* is at present *Geotrupes cuniculus* Fabricius, 1801, based on a misidentification. It has long been recognized that the species involved in Hope's misidentification of *G. cuniculus* is indeterminable. It is proposed that *Scarabaeus ascanius* Kirby, 1819 is designated as the type species.

**Keywords.** Nomenclature; taxonomy; Coleoptera; SCARABAEIDAE; *Bothynus*; *Scarabaeus ascanius*; DYNASTINAE; PENTODONTINI.

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1. Hope (1837, p. 95) established the genus *Bothynus* and included two species, *Geotrupes cuniculus* Fabricius 1801 (p. 20) and *Scarabaeus ascanius* Kirby, 1819 (p. 399). He explicitly designated *G. cuniculus* Fabricius, 1801 as the type species of the genus *Bothynus*. However, Hope's description of the genus *Bothynus* is inconsistent with the true *G. cuniculus*, and it is obvious that Hope used this name based on a misidentification (see Burmeister, 1847, p. 117; Lacordaire, 1856, p. 413; Prell, 1936, p. 185; Endrödi, 1969, p. 108). The true *G. cuniculus* is a well-known species from Cuba, Hispaniola, Puerto Rico, Trinidad, and northeastern South America and is currently classified in the genus *Tomarus* Erichson, 1847. Additionally, it has long been recognized that the species involved in Hope's misidentification of *G. cuniculus* is undeterminable because of Hope's vague description (Lacordaire, 1856; Endrödi, 1969) and the lack of any voucher specimens in the Hope collection at Oxford University (Endrödi, 1969; D. Mann, personal communication to BCR).

2. Lacordaire (1856, p. 413) recognized that the type species of *Bothynus* (Hope's concept of *G. cuniculus*) was indeterminable and proposed *S. ascanius* as the type species instead. Although this action is not valid under the Code, it has been adopted by practically all taxonomists who have dealt with *Bothynus* since 1856 (e.g. Bates, 1888, p. 319; Arrow, 1937, p. 40; Blackwelder, 1944, p. 255; Endrödi, 1969, p. 107;

Dechambre, 1981, p. 126; Martínez, 1983, p. 297; Lachaume, 1992, p. 34; Morón et al., 1996, p. 69; Ratcliffe, 2003, p. 253). Only Cartwright (1959) advocated usage of *G. cuniculus* sensu Fabricius to define the genus.

3. The prevailing usage of *Bothynus* is not consistent with the true *G. cuniculus* as the type species but is consistent with *S. ascanius* as the type species. To apply the rules of the Code and begin using the true *G. cuniculus* as the type species is undesirable because this was not the intent of Hope when he erected the genus, and it would upset the current usage of both the dynastine genera *Bothynus* and *Tomarus* along with the more than 50 species within both genera. Although this is a case of a misidentified type species, the problem cannot be remedied using Article 70.3.2 because the taxonomic species actually involved in the misidentification (Hope's concept of *G. cuniculus*) cannot ever be reliably determined, and the Commission's ruling is needed.

4. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all fixations of type species for the nominal genus *Bothynus* Hope, 1837 before that by Lacordaire (1856);
- (2) to place on the Official List of Generic Names in Zoology the name *Bothynus* Hope, 1837 (gender: masculine), type species *Scarabaeus ascanius* Kirby, 1819, as ruled in (1) above;
- (3) to place on the Official List of Specific Names in Zoology the name *ascanius* Kirby, 1819, as published in the binomen *Scarabaeus ascanius* (specific name of the type species of *Bothynus* Hope, 1837, as ruled in (1) above).

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